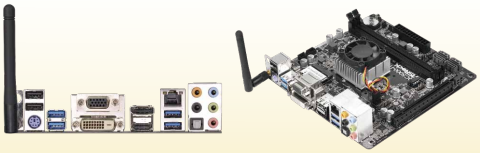
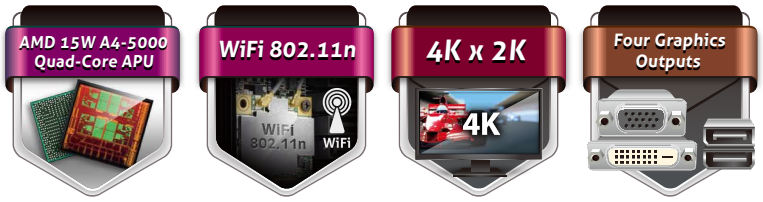
QC5000-ITX/WiFi

AMD FT3 Kabini A4-5000 Quad-Core APU



Product Brief

- AMD FT3 Kabini A4-5000 Quad-Core APU
- All Solid Capacitor design
- Supports DDR3 1600
- 1 PCIe 2.0 x16, 1 mini-PCIe
- Graphics Output Options : D-Sub, DVI-D, HDMI, DisplayPort
- Integrated AMD Radeon™ HD 8330 Graphics, DX11.1, PS5.0
- 6 x USB 3.0 (2 x Front, 4 x Rear), 6 x USB 2.0, 4 x SATA3, 1 x COM Port Header
- Realtek Gigabit LAN
- 7.1 CH HD Audio with Content Protection (Realtek ALC892 Audio Codec)
- WLAN : 1 x 802.11n Module, 1 x ASRock WiFi 2.4GHz Antenna
- Supports ASRock Full Spike Protection, A-Tuning, XFast LAN, XFast RAM, USB Key



Detail Specification

Platform	- Mini-ITX Form Factor - All Solid Capacitor design - High Density Glass Fabric PCB
CPU	- AMD FT3 Kabini A4-5000 Quad-Core APU
Chipset	- SOC
Memory	- 2 x DDR3 DIMM Slots - Supports DDR3 1600/1333/1066 non-ECC, un-buffered memory - Max. capacity of system memory: 32GB
Expansion Slot	- 1 x PCI Express 2.0 x16 Slot (PCIE1 @ x4 mode) - 1 x Mini-PCI Express Slot: For WiFi Module
Graphics	- Integrated AMD Radeon™ HD 8330 Graphics - DirectX 11.1, Pixel Shader 5.0 - Max. shared memory 2GB - Four graphics output options: D-Sub, DVI-D, HDMI and DisplayPort 1.2 - Supports HDMI with max. resolution up to 4K × 2K (4096x2160) @ 24Hz or 4K × 2K (3840x2160) @ 30Hz - Supports DVI-D with max. resolution up to 1920x1200 @ 60Hz - Supports D-Sub with max. resolution up to 2048x1536 @ 60Hz - Supports DisplayPort 1.2 with max. resolution up to 4K × 2K (4096x2160) @ 30Hz - Supports Auto Lip Sync, Deep Color (12bpc), xvYCC and HBR (High Bit Rate Audio) with HDMI Port (Compliant HDMI monitor is required) - Supports HDCP with DVI-D, HDMI and DisplayPort 1.2 Ports - Supports Full HD 1080p Blu-ray (BD) playback with DVI-D, HDMI and DisplayPort 1.2 Ports
Audio	- 7.1 CH HD Audio with Content Protection (Realtek ALC892 Audio Codec) - Premium Blu-ray Audio support - Supports Surge Protection (ASRock Full Spike Protection)
LAN	- PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111E - Supports Wake-On-LAN - Supports Lightning/ESD Protection (ASRock Full Spike Protection) - Supports LAN Cable Detection - Supports Energy Efficient Ethernet 802.3az - Supports PXE
Wireless LAN	WiFi-802.11n Module - 1T1R 150Mbps IEEE 802.11n / 54Mbps IEEE 802.11g / 11Mbps IEEE 802.11b - Supports Station mode (Infrastructure mode and Ad-hoc mode)
Rear Panel I/O	- 1 x Antenna Port - 1 x PS/2 Mouse/Keyboard Port - 1 x D-Sub Port - 1 x DVI-D Port - 1 x HDMI Port - 1 x DisplayPort 1.2 - 1 x Optical SPDIF Out Port - 2 x USB 2.0 Ports (Supports ESD Protection (ASRock Full Spike Protection)) - 2 x USB 3.0 Ports (AMD FT3 Kabini A4-5000 Quad-Core APU) (Supports ESD Protection (ASRock Full Spike Protection)) - 2 x USB 3.0 Ports (Etron EJ188H) (Supports ESD Protection (ASRock Full Spike Protection)) - 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED) - HD Audio Jacks: Rear Speaker / Central / Bass / Line in / Front Speaker / Microphone
Storage	- 2 x SATA3 6.0 Gb/s Connectors by AMD FT3 Kabini A4-5000 Quad-Core APU, support NCQ, AHCI and Hot Plug - 2 x SATA3 6.0 Gb/s Connectors by ASMedia ASM1061, support NCQ, AHCI and Hot Plug
Connector	- 1 x COM Port Header - 1 x TPM Header - 1 x CPU Fan Connector (3-pin) - 2 x Chassis Fan Connectors (1 x 4-pin, 1 x 3-pin) - 1 x 24 pin ATX Power Connector - 1 x Front Panel Audio Connector - 2 x USB 2.0 Headers (Support 4 USB 2.0 ports) (Supports ESD Protection (ASRock Full Spike Protection)) - 1 x USB 3.0 Header by Etron EJ188H (Supports 2 USB 3.0 ports) (Supports ESD Protection (ASRock Full Spike Protection))
BIOS Feature	- 32Mb AMI UEFI Legal BIOS with multilingual GUI support - Supports "Plug and Play" - ACPI 1.1 compliance wake up events - SMBIOS 2.3.1 support - DRAM Voltage multi-adjustment
Support CD	- Drivers, Utilities, AntiVirus Software (Trial Version), Google Chrome Browser and Toolbar, Start8 (30 days trial)

Unique Feature	- ASRock A-Tuning
	- ASRock Instant Boot
	- ASRock Instant Flash
	- ASRock APP Charger
	- ASRock XFast LAN
	- ASRock XFast RAM
	- ASRock Crashless BIOS
	- ASRock OMG (Online Management Guard)
	- ASRock Internet Flash
	- ASRock UEFI Tech Service
	- ASRock On/Off Play Technology
	- ASRock Dehumidifier Function
	- ASRock Easy Driver Installer
	- ASRock Interactive UEFI
	- ASRock Fast Boot
	- ASRock Restart to UEFI
	- ASRock USB Key
	- ASRock FAN-Tastic Tuning
	- Hybrid Booster:
	  - ASRock U-COP
	  - Boot Failure Guard (B.F.G.)
	- Good Night LED

Hardware Monitor	- CPU temperature sensing - Chassis temperature sensing - CPU Fan Tachometer - Chassis Fan Tachometer - CPU/Chassis Quiet Fan - CPU/Chassis Fan multi-speed control - Voltage monitoring: +12V, +5V, +3.3V, Vcore
OS	- Microsoft® Windows® 8.1 32-bit / 8.1 64-bit / 8 32-bit / 8 64-bit / 7 32-bit / 7 64-bit / XP 32-bit / XP 64-bit * USB 3.0 is not supported by Windows® XP
Certifications	- FCC, CE, WHQL - ErP/EuP ready (ErP/EuP ready power supply is required)
Accessories	- Quick Installation Guide, Support CD, I/O Shield - 2 x SATA Data Cables - 1 x ASRock WiFi 2.4GHz Antenna

The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than the original product specification is not guaranteed.

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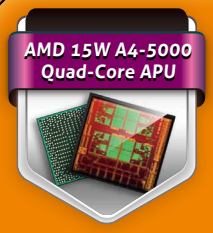
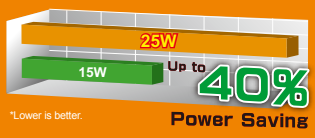
ASRock



Accelerated Processing Unit (APU) is the unique combination of CPU and GPU computing technologies. The onboard A4-5000 can provide up to 40% more power efficient than AMD's previous generation Brazos APU motherboards. It not only provides excellent computing capability with its four cores, but also vastly improves today's Internet, video processing, playback, and gaming experience.

The Best 15W Quad-Core SOC APU

Power Saving Improvement



*Lower is better.

- Kabini 25W Quad-Core Socket APU
- Kabini 15W Quad-Core A4-5000 Onboard APU

PCMark Vantage Overall

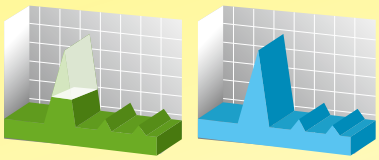
- A4-5000 Kabini Quad-Core APU
- E2-1800 Brazos 2.0 APU

This motherboard comes with a WiFi 802.11n module that offers support for WiFi 802.11 b/g/n connectivity standards.

4K is a new standard for display resolutions with a minimum of 3840 x 2160 pixels, which is twice the horizontal and vertical resolution of the 1080p format and four times as many pixels overall.

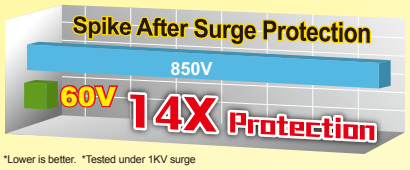
Surge Protection

Protects the motherboard from excessive surges from the power supply unit.



Protected from power surges and spikes

Unprotected



*Lower is better. *Tested under 1KV surge

- Other motherboards with lower surge protection level
- ASRock motherboards with higher surge protection level

Lightning Protection

The onboard Realtek LAN chip is protected against sudden and violent voltage spikes caused by lightning.

- Anti-Lightning LAN IC
- Traditional LAN IC

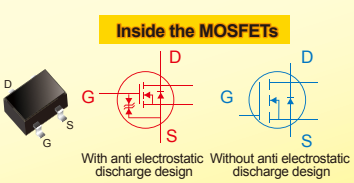
ESD Protection

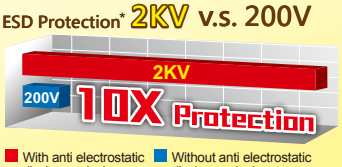
USB Added ICs to protect the onboard USB ports from electrostatic discharges.

For USB 2.0 For USB 3.0

LAN Prevents the onboard LAN from being damaged by electrostatic discharges.

MOSFETs MOSFETs in critical areas use a special design for protecting them from electrostatic discharge during the installation process.





- With anti electrostatic discharge design
- Without anti electrostatic discharge design

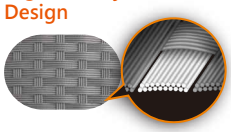
* Human Body Mode

ASRock motherboards feature a new High Density Glass Fabric PCB design that reduces the gaps between the PCB layers to protect the mother-board against electrical shorts caused by humidity.

Short Circuit Protection Level

- High Density Glass Fabric PCB
- Traditional Glass Fabric PCB

High Density Design



Traditional

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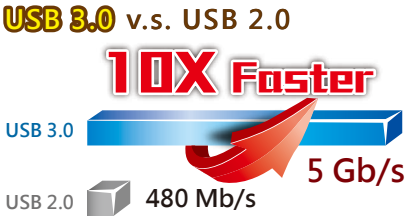
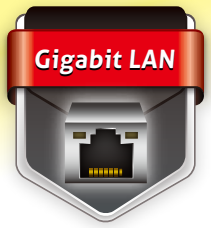
ASRock

All capacitors on this board are solid capacitors. With these solid caps, ASRock motherboards are allowed to perform more stably and ensure longer lifetime.

Never run out of graphics outputs! This motherboard supports all four kinds of graphics D-Sub, DVI-D, HDMI and DisplayPort.

In addition to the original two USB 3.0 5Gb/s ports and two SATA3 6Gb/s ports, we added third party ICs to provide four extra USB 3.0 5Gb/s ports plus two extra SATA3 6Gb/s ports for supporting all of your peripherals with fast data transfer speed.





This motherboard uses a Realtek gigabit LAN chip to support extremely fast internet connections.

A-Tuning

A-Tuning is ASRock's multi purpose software suite with a new interface, more new features and improved utilities, including XFast RAM and a whole lot more.

FAN-Tastic Tuning

Configure different fan speeds for respective temperatures using the graph. The fans will automatically shift to the next speed level when the assigned temperature is met.

USB Key

Just plug in the USB Key and let your computer log in to windows automatically without having to type your username and password!

UEFI Tech Service

Contact ASRock Tech Service by sending a support request form from the UEFI setup utility if you are having trouble with your PC.

Dehumidifier

Users may prevent motherboard damages due to dampness by enabling “Dehumidifier Function”. When enabling Dehumidifier Function, the computer will power on automatically to dehumidify the system after entering S4/S5 state.

Easy Driver Installer

For users that don’t have an optical disk drive to install the drivers from our support CD, Easy Driver Installer is a handy tool in the UEFI that installs the LAN driver to your system via an USB storage device, then downloads and installs the other required drivers automatically.

OMG

ASRock OMG technology allows you to establish an internet curfew or restrict internet access at specified times. Administrators are able to schedule the starting and ending hours of internet access granted to other users.

XFast RAM creates a virtual disk from the system memory to fully utilize the memory space. Shortening the loading time of visited websites and boosting the speed of applications such as Adobe Photoshop 5 times faster!

* Lower is better

ASRock XFast LAN provides faster internet access with LAN application prioritization, so that users may lower the latency in games or watch Youtube videos and download simultaneously.

ASRock motherboards with XFast LAN Other motherboards without XFast LAN

Time latency in World of Warcraft